EFFICACY STUDY REVIEW

by Kevin J. Sweeney, Entomologist - IB

To: Beth Edwards

Date: September 15, 1998

EPA Reg. or File No.: 68451-1

Product Name: Deltamethrin 4% Collar

Registrant: Hoechst Roussel Vet

PM: George LaRocca

Action: 305

Submission No. S546541

DP # : D248072

Chemical: deltamethrin 4%

Studies Submitted:

MRID # 44578702 Review of the Anti-feeding Effects of Synthetic Pyrethroids to Mosquitoes and Phlebotomine Sandflies

MRID # 44578703 Initial "Kill" Activity of Deltamethrin 4% Collars Against *Ixodes scapularis* Nymphs using Treated Dog Hair as the Testing Substance

MRID # 44578704 Report of Laboratory Trials on the efficacy of Deltamethrin 4% Dog Collars for Control of Ticks - *Ixodes ricinus* and *Rhipicephalus sanguineus* in Dogs

MRID # 44602901 Report of a Controlled Field Trial on the Efficacy of Deltamethrin 4% Dog Collars for control of Ticks - *Ixodes ricinus* and *Rhipicephalus sanguineus*.

MRID # 44578705 Determine the Effect of Deltamethrin 4% Collars on Repellency, Mortality, and Blood feeding of Adult *Aedes aegypti* Mosquitoes.

Comments:

The registrant wishes to add deer ticks and mosquitoes to the label.

Based on the submitted studies, the addition of the claims for "deer ticks" is acceptable, black-legged ticks I also acceptable. However, if a species name specific claim is made - then only *Ixodes scapularis* and/or *Ixodes pacificus* may be used in addition to the terms above. *Ixodes sp.* is not acceptable, should be removed and the above species names should replace it.

The label claim for mosquitoes reads: "Collar kills and repels mosquitoes and prevents them from feeding." The data submitted do not support these claims and for the following reasons they should be removed from the label:

1. The data do not show that this product is an efficacious repellent. The study results demonstrate a reduction in blood-feeding but this reduction is insufficient to support repellent claims. The maximum reduction in feeding between the control and treated groups is 84.4% with a range of 15.9% to 84.4%. In addition, there was no statistically significant difference in landings between treated and control groups.

2. The data do not support the "kill" claim for mosquitoes. The range was 69% - 91.1%. The 91.1% mortality result was for one data point only. All other measurements of mortality were below 90%. This is less than the 95% required by Subdivision G Guidelines.

I do not think we should entertain "aids in" claims for any repellent product or one meant to kill any public health pest feeding on a host.